

## **IN THE CLAIMS**

1-34. (Cancelled)

35. (New) An apparatus, comprising:

a piston having a solid head, a skirt, a longitudinal centerline and a first end including an annular surface, said piston having a circumferential sidewall portion and a bottom wall portion defining a combustion bowl within said solid head at said first end with said annular surface extending thereround, said sidewall portion including a sharp edge at the intersection of said annular surface and a part of said sidewall portion extending substantially parallel to the centerline and a substantially rounded lip overhanging a portion of said combustion bowl and spaced axially from said sharp edge and an upwardly flared portion located between said sharp edge and said substantially rounded lip, said combustion bowl defined at said sharp edge is round and said rounded lip is closer to said centerline than said sharp edge is to said centerline, and wherein said sharp edge directs a fuel passing out of said combustion bowl away from said annular surface.

36. (New) The apparatus of claim 35, wherein said sharp edge limits the fuel from passing out of said combustion bowl and onto said annular surface.

37. (New) The apparatus of claim 35, wherein said sharp edge limits a fuel from passing out of said combustion bowl and across said annular surface.

38. (New) The apparatus of claim 35, wherein said substantially rounded lip is located between said bottom wall portion and said sharp edge.

39. (New) The apparatus of claim 35, wherein said part of said sidewall portion is located between said sharp edge and said upwardly flared portion.

40. (New) The apparatus of claim 35, wherein said combustion bowl is substantially symmetrical about said longitudinal centerline;

wherein said substantially rounded lip is located between said bottom wall portion and said sharp edge, and wherein said substantially rounded lip overhanging a portion of said combustion bowl.

41. (New) The apparatus of claim 35, wherein said piston is formed of one of a metallic, intermetallic, ceramic and composite material.

42. (New) An apparatus, comprising:

a piston body having a longitudinal centerline and a first end surface, said piston body having a combustion bowl defined therein with an entrance adjacent said first end surface, said piston body having a sharp edge portion extending around said entrance for directing a fuel exiting said combustion bowl away from said first end surface and a rounded portion for receiving a fuel thereon within said combustion bowl, said rounded portion overhangs a portion of said combustion bowl and is located closer to said longitudinal centerline than said sharp edge portion is located to said centerline.

43. (New) The apparatus of claim 42, wherein said piston body has an outer circumferential surface, and wherein said sharp edge portion is located radially inward of said outer circumferential surface; and wherein said combustion bowl is symmetrical about said longitudinal centerline.

44. (New) The apparatus of claim 42, wherein said sharp edge portion directing the fuel exiting the combustion bowl in a direction approximately parallel with said centerline.

45. (New) The apparatus of claim 42, wherein said rounded portion extending circumferentially around said combustion bowl.
46. (New) The apparatus of claim 45, wherein said piston body having a bottom surface defining a portion of said combustion bowl, and wherein said rounded portion is located between said bottom surface and said sharp edge portion.
47. (New) The apparatus of claim 46, wherein said piston body having an upwardly flared portion defining a portion of said combustion bowl, and wherein said upwardly flared portion is located between said rounded portion and said sharp edge portion.
48. (New) The apparatus of claim 42, wherein said piston body has an outer circumferential surface; wherein said sharp edge portion is located radially inward to said outer circumferential surface; wherein said combustion bowl is symmetrical about said longitudinal centerline, wherein said piston body having a bottom surface defining a portion of said combustion bowl, and wherein said rounded portion is located between said bottom surface and said sharp edge portion; wherein said piston body having an upwardly flared portion defining a portion of said combustion bowl, and wherein said upwardly flared portion is located between said rounded portion and said sharp edge portion; and wherein said rounded portion, said upwardly flared portion extend circumferentially around said bowl.
49. (New) The apparatus of claim 42, wherein said piston body is free of internal cavities located between said combustion bowl and the outer surface of the piston body.
50. (New) A piston, comprising:  
a piston body having a head portion and a skirt portion, said head portion being free of internal cooling passages and having a longitudinal centerline and a first end

surface with a combustion bowl defined therein with an entrance adjacent said first end surface, said head having a sharp edge portion extending around said entrance for directing a fuel exiting said combustion bowl away from said first end surface and a rounded portion for receiving a fuel thereon within said combustion bowl, said rounded portion overhangs a portion of said combustion bowl and is located closer to said longitudinal centerline than said sharp edge portion is located to said centerline.

51. (New) The apparatus of claim 50, wherein said sharp edge portion limits the fuel from passing out of said combustion bowl and onto said first end surface.

52. (New) The apparatus of claim 50, wherein said sharp edge portion limits a fuel from passing out of said combustion bowl and across said first end surface.